



SEAI Seminar

“Developing Supply Chains for Public Sector Retrofitting”



Welcome

Declan Meally

SEAI Director of Business, Public Sector & Transport



An Roinn Comhshaoil,
Aeráide agus Cumarsáide
Department of the Environment,
Climate and Communications

Department of the Environment, Climate and Communications

Una Dixon

Principal Officer in the Non-Residential Energy Efficiency
Division



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Climate and Communications

New EU laws – 2030 en route to 2050

Energy Efficiency Directive

- 15.86% reduction in energy consumption in public sector by 2030 compared to 2021
- 24% of floor area of buildings owned by State to be retrofit by 2030 or equivalent energy savings delivered
- Public bodies must consider EPCs
- Energy Efficiency First Principle as a legal requirement

Energy Performance in Buildings Directive (EPBD)

- MEPs – Minimum Energy Performance Standards (MEPS)
- 16% worst performing buildings to be upgraded by 2030; 26% by 2033
- Solar by set dates, where technically, economically or functionally feasible
- EV charging
- National Building Renovations Plans – 2030, 2040, 2050

“Energy Efficiency First”



1. First – shrink energy demand
2. Then try to decarbonise the lower amount of energy you really need

Easier to meet all other energy and climate goals – less environmentally harmful

Energy Efficiency and the Energy Trilemma:

- Security of Supply
- Sustainability
- Affordability/Competitiveness



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Recent Progress

- **Pathfinder capital programme - SEAI /National Estate Portfolio Leads (Match-funding)**
 - Ramping up capital spend
 - SEAI - started with €5M in 2017
 - €14M in 2021
 - €35M in 2022
 - €60M in 2023 (outturn: almost €70M due to reallocations)
 - Developing internal capacity in national estate portfolio leads
 - Moving from shallow to deep retrofits
 - Non-Capital side – persistent improved engagement from public bodies over last decade – M&R reporting
 - Improving data on public sector building stock



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Trajectory to 2030 and beyond

- Onerous energy performance and decarbonisation targets for public sector
- Accelerate retrofit, operational energy efficiency and decarbonisation activity
- Avail of capital funding being provided in Infrastructure, Climate and Nature Fund (ICNF)
- Scale of challenge – requires private funding
- European Commission study –€9.4bn
- SEIF - National Roundtable
 - *European Energy Efficiency Financing Coalition*
 - *National Hubs to leverage private funding*
 - *Bring stakeholders together*
 - *Develop new funding mechanisms*
 - *EPCs, funds, loans etc*



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Climate and Communications

Thank You

SEAI Energy Show 21/3/24



OPW

Oifig na
nOibreacha Poiblí
Office of Public Works

Office of Public Works (OPW)

Clíodhna Rice

Senior Architect, Programme Management Unit

OPW Climate Action Roadmap



OPW Óifige na nOibreacha Poiblí
Office of Public Works

**Office of Public Works
Climate Action Roadmap
May 2023**



Prepared by the Office of Public Works

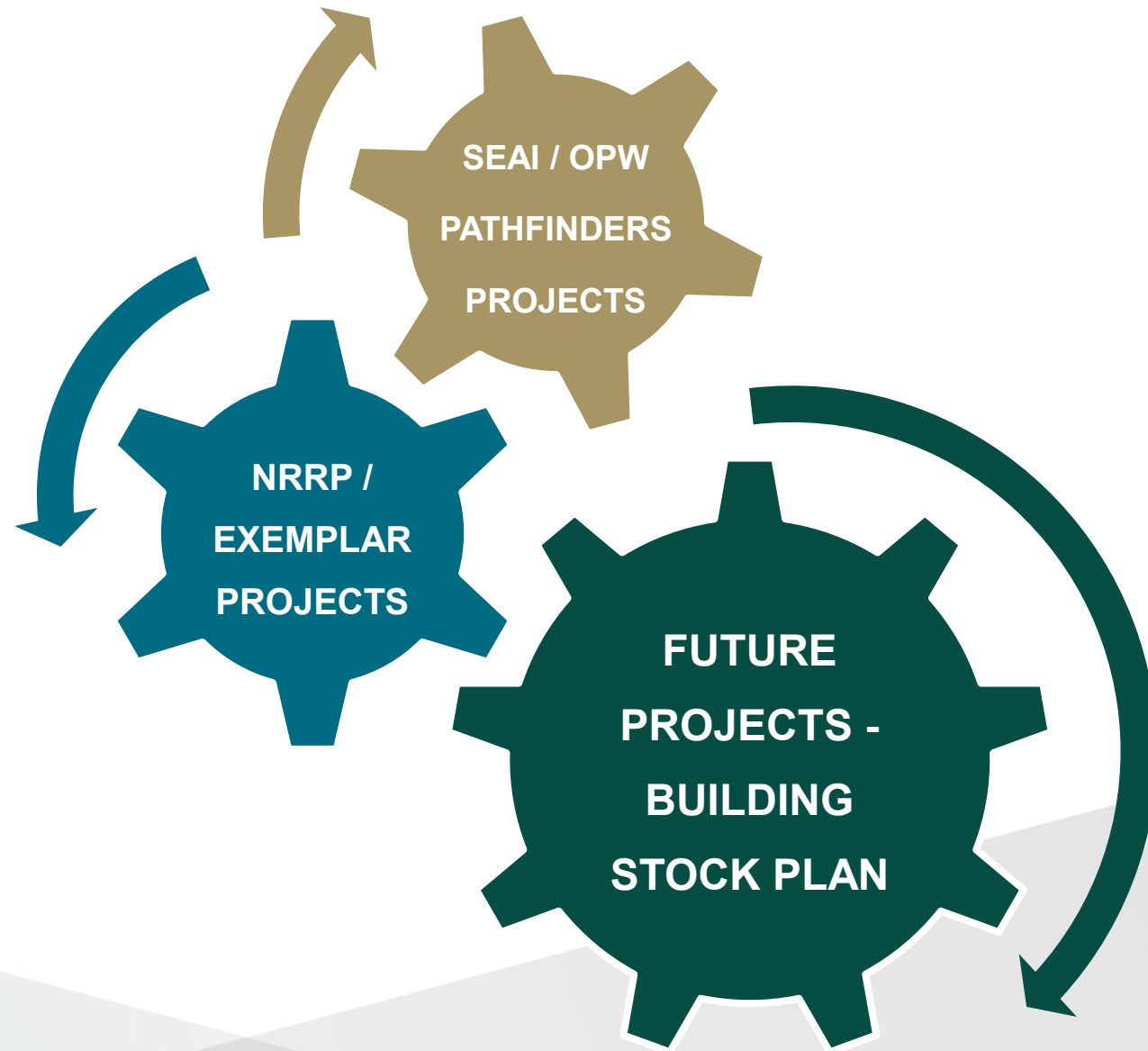
OPW responsible for **maintenance** of circa **2,000 buildings**

Primary requirement is to **identify actions to reduce energy usage & GHG emissions** in the **200+ buildings** that the **OPW occupies**

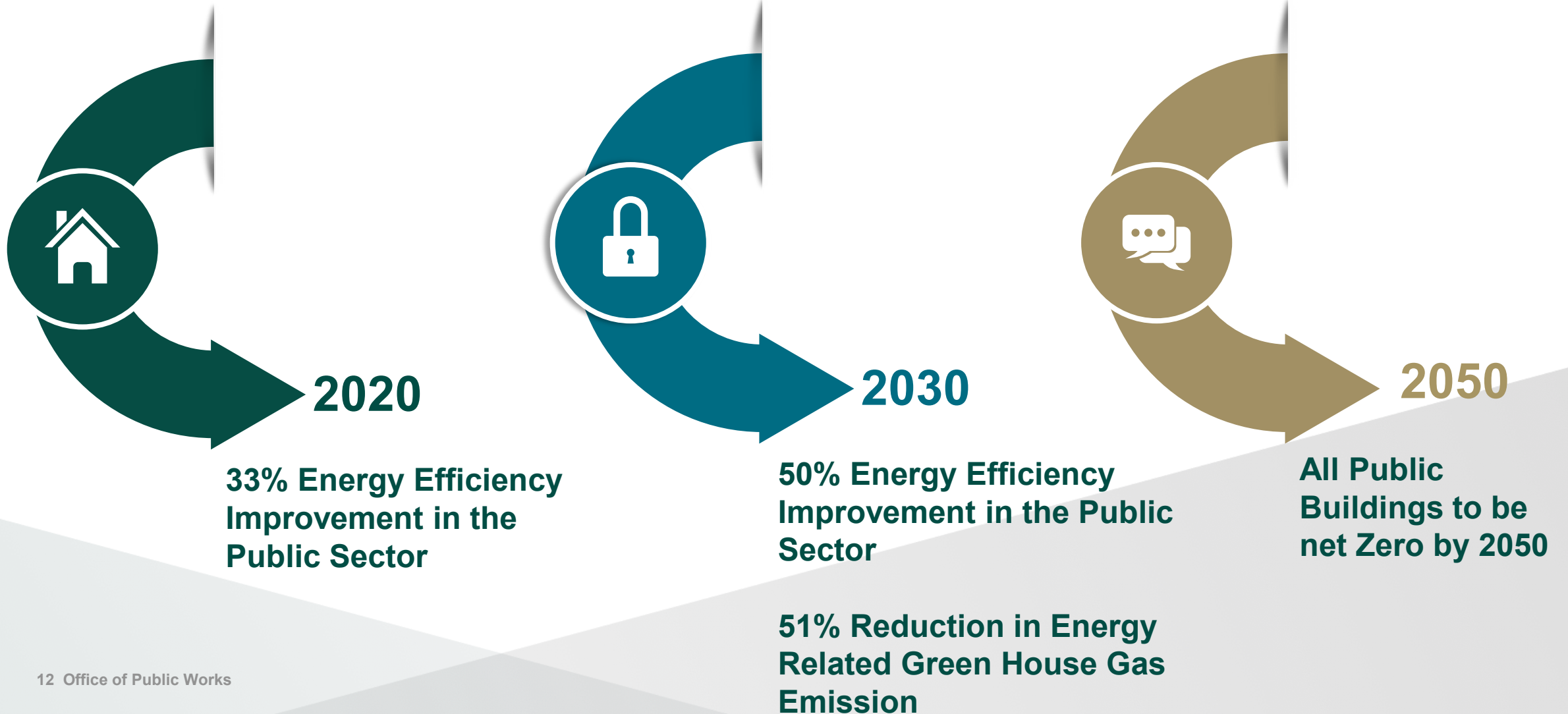
Prioritise fabric upgrade programmes of **OPW occupied buildings** based on **energy usage**, the **long term accommodation needs** of the OPW, utilisation, the **condition of existing assets**

Develop a portfolio wide **Building Stock Plan** which will prioritise **fabric upgrade programmes** to provide a pipeline of **planned maintenance, shallow retrofits and deep retrofits**, disposals and consolidations across the Sectoral portfolio. Building Stock Plan will identify each property's **pathway to decarbonisation**.

Incorporate **lessons learned** from the **Pathfinder, Exemplar & NRRP** projects, publish findings and **integrate into work processes**



Climate Action Plan – Public Sector Targets



SEAI / OPW Building Retrofit Pathfinder



A Pathway to Achieve Targets

- ❖ The **Sustainable Energy Authority of Ireland (SEAI)** and **OPW** have agreed to collaborate on the delivery of the Building Retrofit Pathfinder Programme from **2022 – 2024** with overall funding of **€30 million** from SEAI.
- ❖ The shared objectives are to deliver a **scalable model** for **future retrofit interventions**.



SEAI / OPW Building Retrofit Pathfinder



- **Retrofits** of a selection of **OPW managed buildings** to **build an evidence base** and **grow scale** for a **larger national programme**
- Funding of **€30m** by SEAI
 - Includes **fees & energy upgrade related construction** costs
 - Excludes **elective works** or **non energy upgrade** works
- OPW provides **design, procurement & PM** services

SEAI / OPW Building Retrofit Pathfinder

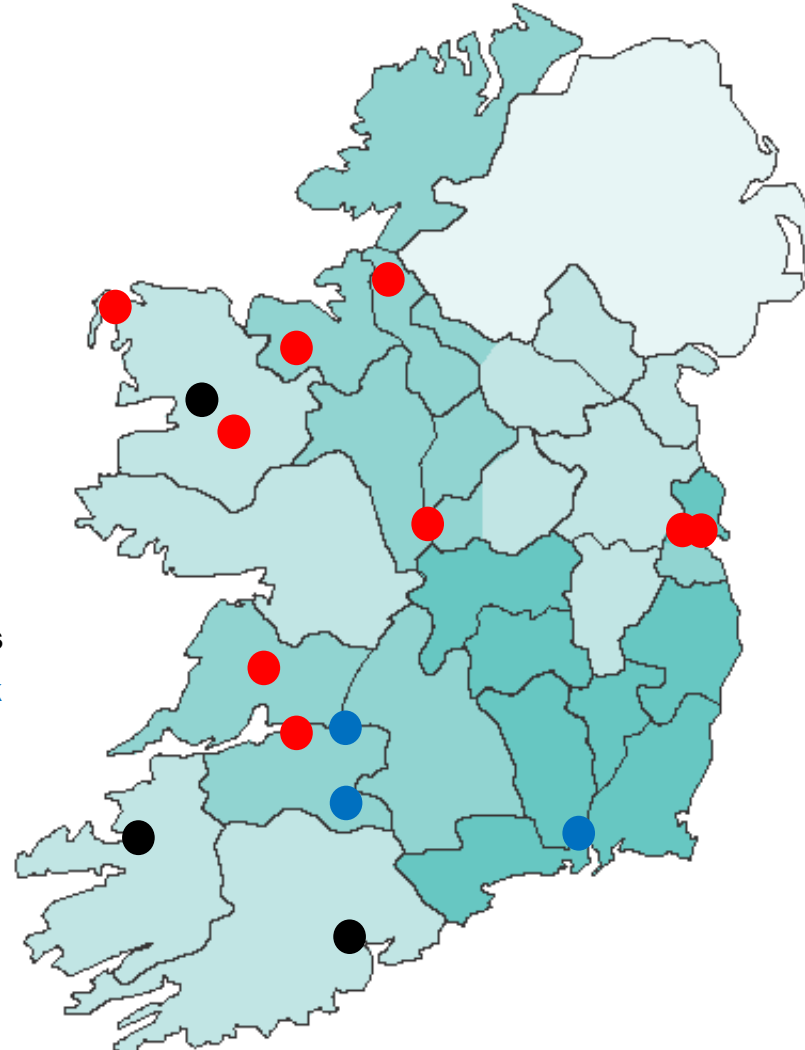


Post Completion Review and Benefits Realisation

- **Last stage of the project lifecycle**
- **Identifies lessons learned** and drives **continuous improvement** in how public bodies **evaluate, plan and manage public investment projects**
- Translates the **lessons learned** to inform sectoral and **national guidance** and **future projects**
- OPW to report on the energy performance of projects using **Measurement and Verification (M&V)** of heat pumps, solar PV and LED lighting etc.



Pathfinder Programme Projects 2024



Belmullet Garda Station, Mayo

Michael Davitt House, Castlebar

Balla Garda Station, Mayo

RIC (former) Barracks, Ennis

Block 1, Government Buildings Ennis

Murroe Garda Station & MQ, Limerick

Pallaskenry Garda Station, Limerick

Ballylanders Garda Station, Limerick

Tralee Garda Station, Kerry

Togher Garda Station, Cork

Manorhamilton, Leitrim

Tubbercurry GS / DSP, Sligo

Department of Education, State Exams, Athlone

Ronanstown Garda Station, Dublin

Hanover Street East, Dublin

Block 1, Government Office Waterford

- Currently out for tender
- Will go for tender this year
- Project Ongoing / Complete

Ennis Government Offices, Block 1 (DSP)



Status: Completed Nov 2023

Works:

- External Wall Thermal Upgrade
- Roof and Ceiling Insulation
- Roof Light Replacement
- Air tightness Upgrade
- Draught Lobby
- Bivalent Heating System
- Heat Recovery Ventilation
- Lighting Upgrade
- Solar PV panel & EV Charging
- Windows replaced in 2020



Project Value: €4.4M

Michael Davitt House, Castlebar



Phase 1 – Complete May 2023

- Window Replacement

Phase 2 – Commencing on Site 2024

- External insulation
- New radiator & pipework distribution system
- Air Source Heat Pump
- MVHR MIC increase
- PV installation

Estimated Project Value: €5M



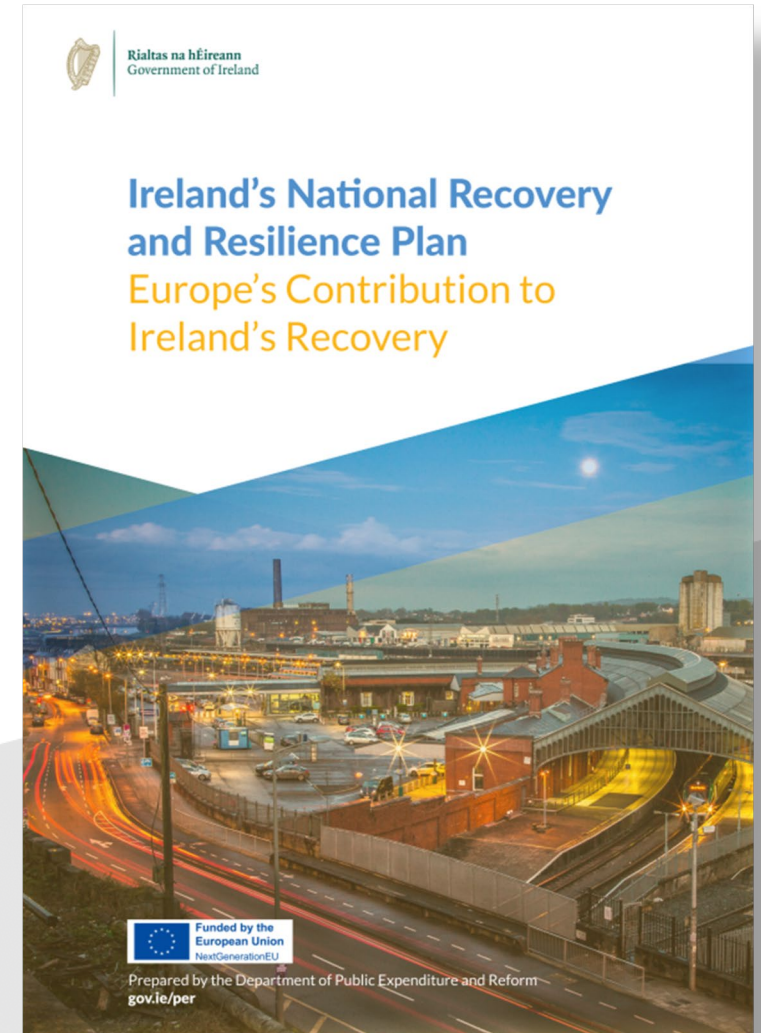
National Recovery and Resilience Plan (NRRP)



- July 2020
- European Council, adopted **€750 billion recovery package** for Europe in response to the Pandemic
- Ireland - **€915 million** in grants of which 37% allocated to **climate actions**

NRRP Priority no 1: Advancing Green Transition

- 1.3 A Public Sector Retrofit Pathfinder Project to undertake the deep retrofit of public office accommodation



NRRP – Kilcairn Government Offices



- **OPW Owned Building**
- **Built in 2007**
- **3,273 sqm**
- **Five clients occupying the building**
- **Project Value: €8.64M**
- **IPD Framework**

NRRP – Kilcairn Government Offices



Issues Identified

- Poor thermal performance of the building fabric
- Inefficient heating & ventilation
- Fully Air Conditioned building
- High energy consumption and CO₂ emissions
- Structural issues
- Roof water ingress



NRRP – Kilcairn Government Offices



- **Insulation** in external walls
- Increase in **natural ventilation** ie. removal of AC from majority of building eg. offices spaces
- **Heat Pump**
- Extensive **PV** installation on the roof
- High spec **glazing** with **solar control**
- Installation of **EV charging** units
- **Biodiversity** – bird nesting boxes in façade
- Secure **bicycle** parking

Q3 2023

Commencement
on Site

Q4 2024

Scheduled
Completion

NRRP - Tom Johnson House



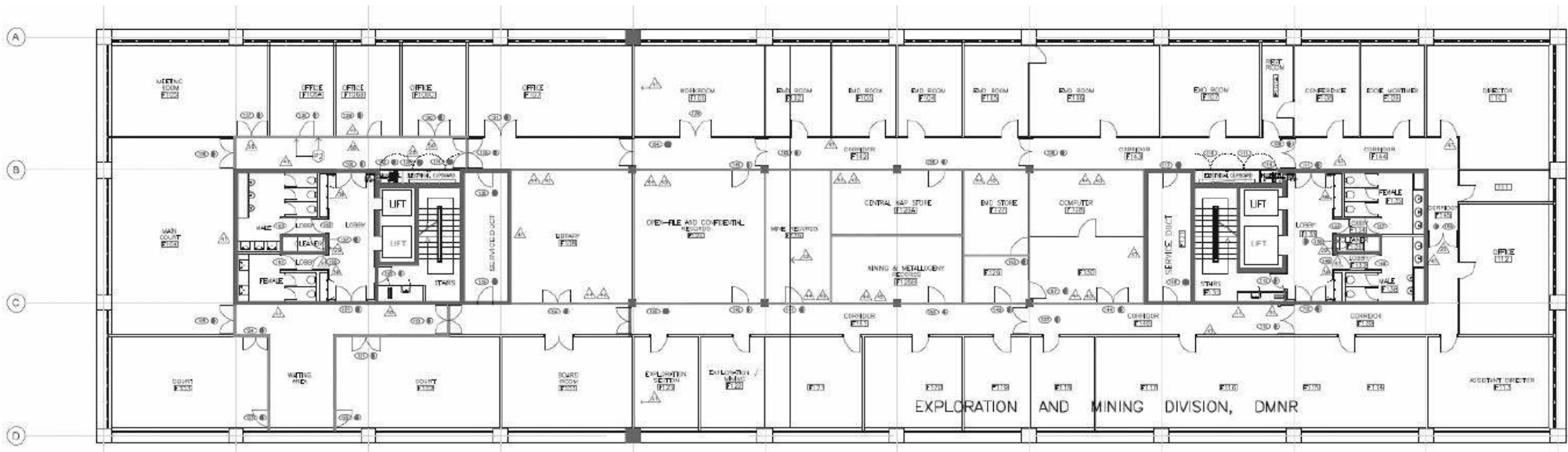
BER C3 → **BER A2**

Deep Retrofit of offices for DECC

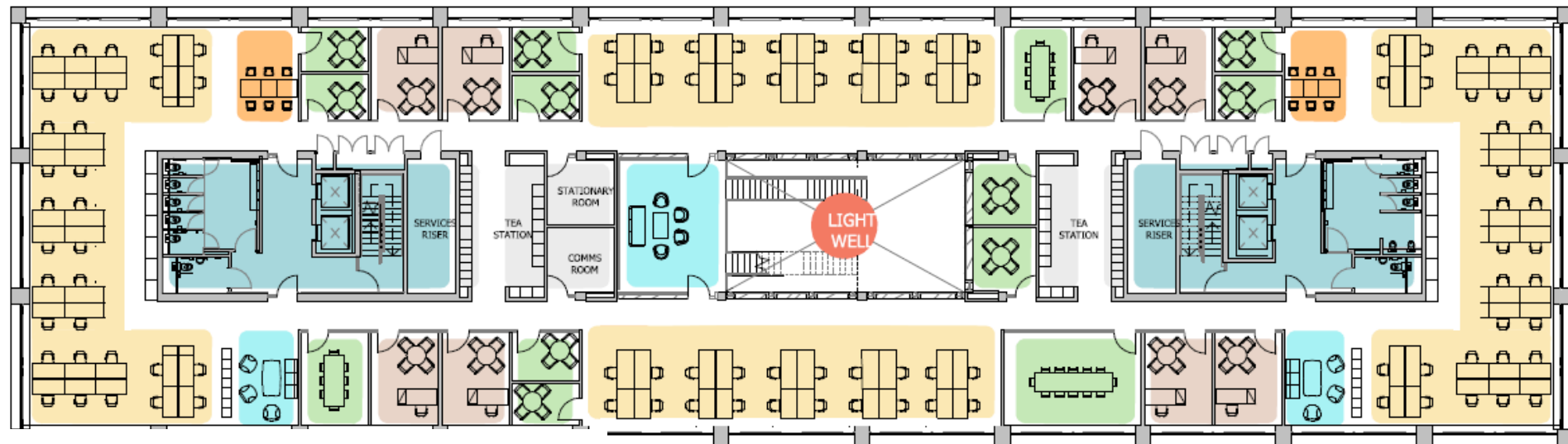
Status: Complete

Works:

- Renewables
 - PV Panels
 - Air Source Heat Pump
 - Heat Recovery
- EV Charging
- Lighting Upgrade
 - Optimised Daylight
 - Low Energy LED Lighting
- Ventilation
 - Stack Effect through new atrium
- Fabric Upgrade & Thermal Modelling
- Air Tightness



Typical Floor Plan 2019



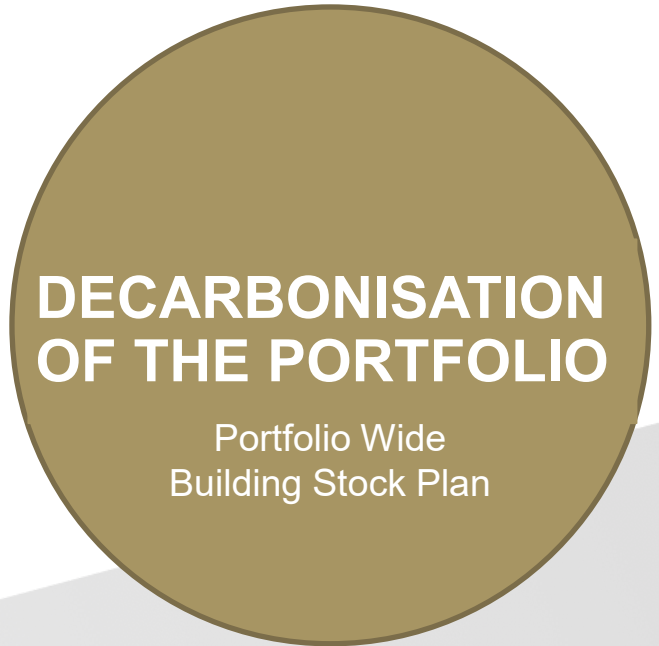
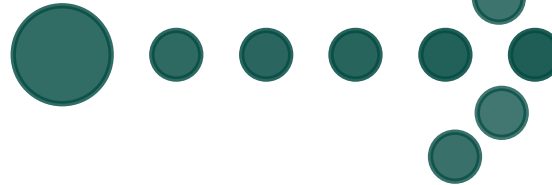
Typical Floor Plan 2023







OPW / SEAI PATHFINDER PROJECTS



NRRP / EXEMPLAR PROJECTS



Building Stock Plan



Rialtas na hÉireann
Government of Ireland

Public Sector
Climate Action Mandate
Climate Action Plan 2024



Prepared by the Department of the
Environment, Climate and Communications
Gov.ie

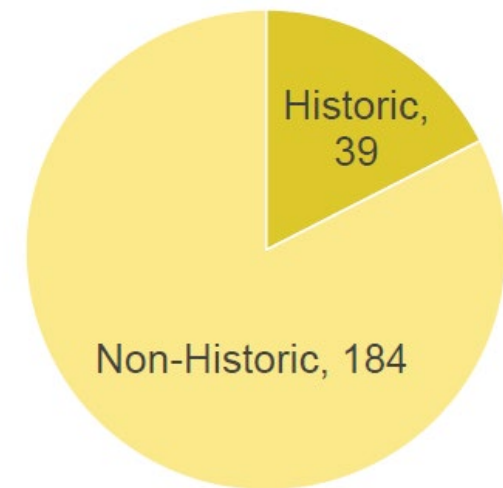
- All public sector bodies should develop a **building stock plan**, in line with EPBD by 2023 for **retrofitting their building stock** to meet **Climate Action Plan (CAP) targets**
- As part of the building stock plan, public sector bodies should **undertake data gathering** and consider the **long term** (to 2050) **retrofit key performance indicators**
- **13,000** Public Sector Buildings (estimate)
- Addressing **top 1000** Significant Energy Users (SEU's) will address **80% of total emissions**.

Building Stock Plan



- OPW identified their **top 200 Significant Energy Users (SEUs)**
- Identified Five **Categories of Intervention**
 - Shallow Retrofit
 - Shallow Retrofit - Historic
 - Deep Retrofit
 - Deep Retrofit – Historic
 - 2000's Retrofit
- Developed an **Order of Magnitude Cost**
- Government to provide **funding**

Region	No. Buildings
Dublin North	35
Dublin South	49
Mid West	32
North East	25
North West	18
South East	25
South West	23
West	16



What's Next?



- Awaiting instruction to proceed from **Government**
- Ongoing **M&V** of **Pathfinder** & **NRRP** Projects



- Requirement to develop alternative, **more agile delivery options**
- How to 'bundle' projects into **Programmes**?



- OPW engaging with **construction industry** to open up **opportunities for collaboration and delivery**



OPW

Oifig na
nOibreacha Poiblí
Office of Public Works

THANK YOU!



An Roinn Oideachais
Department of Education



Department of Education Retrofitting and Decarbonisation

SEAI Energy Show

Michael Walsh & David Beagon, Senior M&E Engineers, Climate Action Unit

Introduction



- Schools Energy Retrofit Pathfinders
- Schools Energy Inventory Profile
- REPower EU Retrofits
- Biomass Programme
- Schools PV Programme



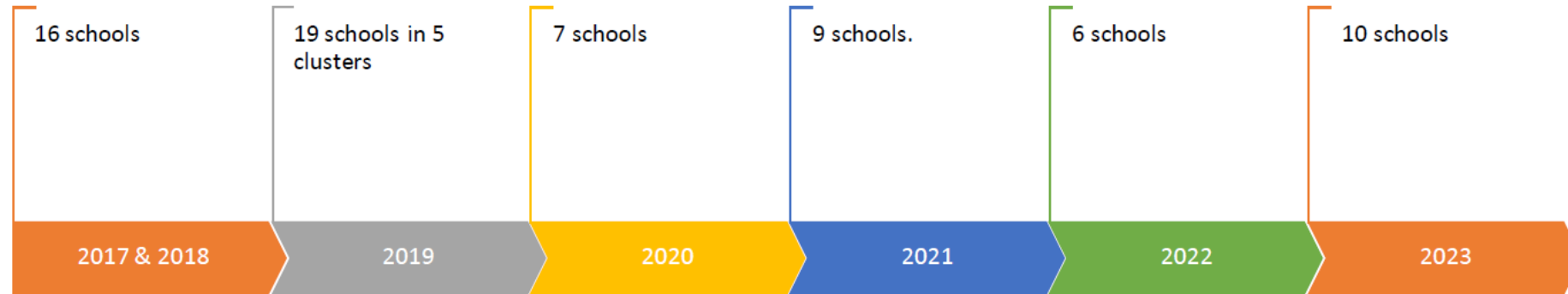
Energy Policy Research Programme: Pathfinder



- 2017: multi-annual pilot energy retrofit in partnership with SEAI
- LWETB & LCETB devolved delivery partners
- Matching funding basis between Department of Education, and Department of Energy, Climate Action and Communications
- To inform and create accurate and scalable model for energy-efficient retrofits of schools
- To scale to an energy retrofit programme for the schools sector
- 54 projects completed, 24 underway.

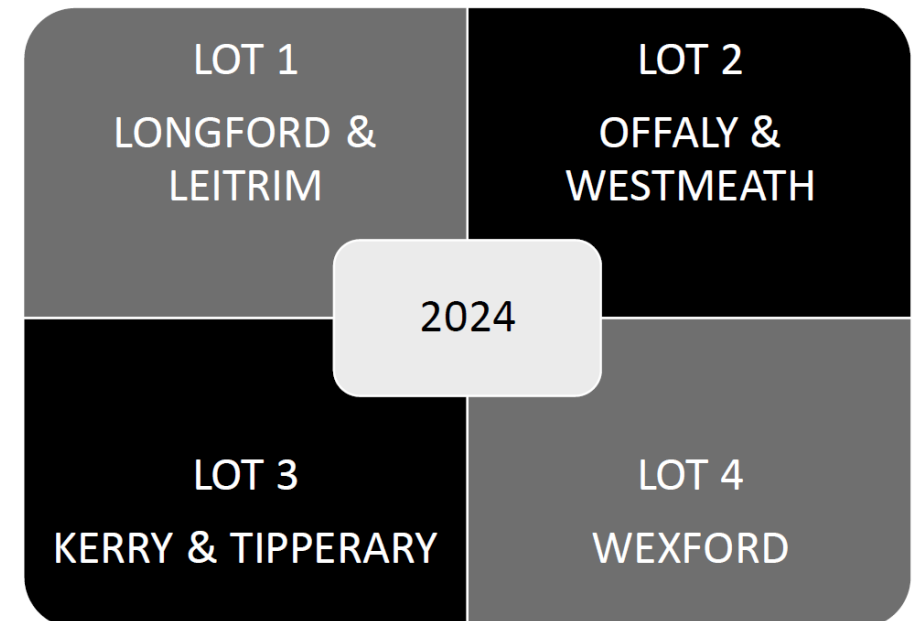


Retrofits to date and ongoing



2024 Programme

- 14 schools in programme testing design and build
- Tender return April 2024
- On site works starting this summer
- Strong energy modelling and calculation requirements to meet programme objectives
- Air and ground source heat pumps and biomass element



Energy Retrofit Pathfinder – Project Brief



Renewable Heating System meeting a minimum of 90% of the annual space heating demand:

- Schools with Heat Pumps, the total heat loss of the school should be less than 55 W/m²
- Schools with Biomass, ESCO model
- Carbon savings target of >50% from the thermal energy to the school
- Role of EED Expert in Design and Post Occupancy performance.



Energy Retrofit Pathfinder



The challenge is decarbonisation of space heating

The Pathfinder has identified 4 building blocks required for decarbonisation:

- Adequate electrical infrastructure
- Fabric improvement to ensure compatibility for heat pumps
- Heat recovery ventilation to reduce heat load
- Compatible heating distribution system.



Menu of Fabric and M&E Works



Technologies include a mix of:

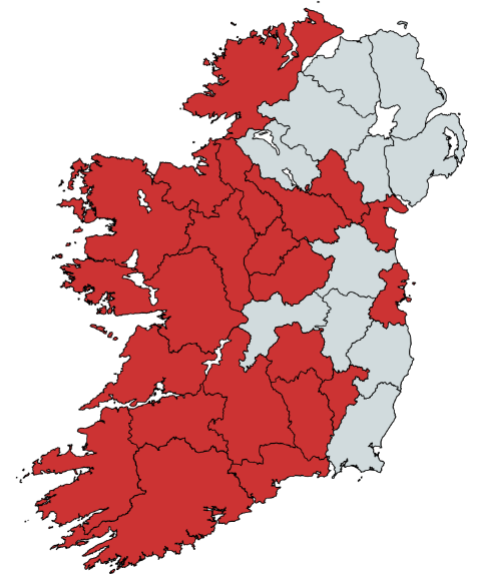
- Roof or Attic insulation (U Value up to $0.16 \text{ W/m}^2/\text{K}$)
- Walls – pump fill, external or internal (up to $0.21 \text{ W/m}^2/\text{K}$)
- Floors (suspended timber floors only)
- Windows and doors (up to $1.4 \text{ W/m}^2/\text{K}$)
- Air tightness works
- Renewable heating (heat pumps)
- New BMS controls and heating distribution as required
- Mechanical Ventilation with Heat Recovery
- Lighting and controls upgrades
- Energy Monitoring and Targeting (M&T) systems
- Solar photovoltaic systems



Schools Energy Inventory Profile



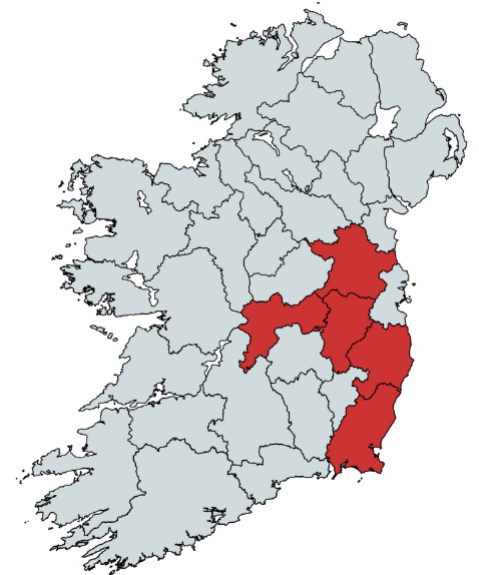
- Pilot carried out with the EIB in five counties in 2022 of 600 schools
- Full roll out this year and next in 21 counties
- Approximately 3,400 schools, in lots on regional basis
- Delivered by energy professionals
- Tender Q3 2024
- Data compiled Q4 2024 to Q4 2025



REPower EU Programme



- Kildare, Meath, Offaly, Wexford and Wicklow
- Typically 8 to 10 classroom schools, 25 to 30 schools
- Designed by employer, two month programme on site
- Tender for design teams in April and Contactors in Q3 2024
- Up to 10 bundles 2 to 5 projects per bundle
- Construction period Summer 2025, or earlier where phasing is possible



ESCO Biomass Programme

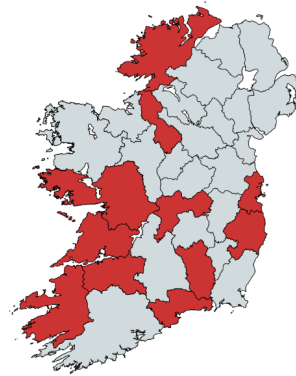


- Biomass heating with capital funded ESCO - 15 year contract
- SEAI Support Scheme for Renewable Heat (SSRH)
- Funded by SEAI and Department of Education
- Five School Pilot 2024
- Light retrofits
- Design team tender this month, contractor tender summer 2024
- To inform a wider rollout of 200 schools



Schools PV Programme

- Pilot Launched November 2023 6 kW per School
- Clare, Donegal, Dublin City Council, Galway, Kerry, Kilkenny, Leitrim, Limerick, Offaly, Waterford and Wicklow.
- Approx 1500 applications to date
- Full roll out in 2024 to the remaining counties



Thank You





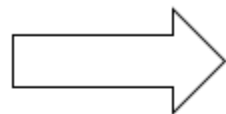
Health Service Executive

Vincent Brennan

Estates Manager, HSE Capital Estates

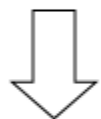
Energy and buildings related emissions.

Who

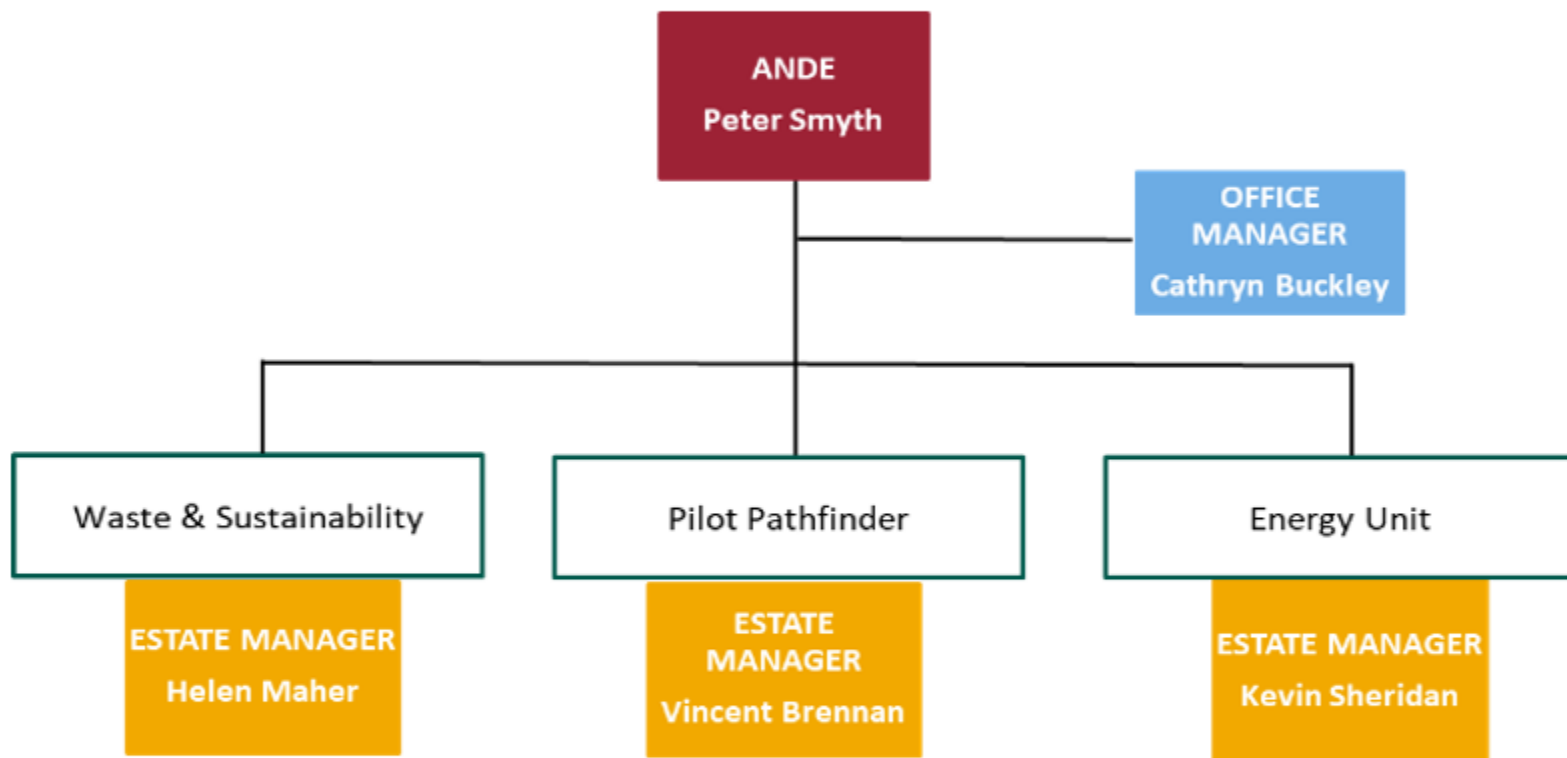


and

How



HSE HSE Capital & Estates
Climate Action & Sustainability Office



HSE Infrastructure Decarbonisation Roadmap with detailed actions has been published and is being implemented





HSE/SEAI ROO Fund

Since 2019 the following Energy and Carbon improvement minor capital works have been completed

Project Type	2019	2020	2021	2022	2023	Total
LED lighting	22	35	49	117	80	303
PV Panels	0	6	9	16	18	49
Heating Controls BMS	14	19	12	15	11	67
Building Fabric/Other/Windows/ Insulation	6	6	9	18	22	61
Pumps	13	10	15	7	14	59
Heat Pumps	0	0	5	10	9	24
Audits/Surveys	4	12	6	21	13	56
Total	59	88	99	183	154	583





Deep Energy Retrofit has a Major Role to Play

- Progressing a **Pilot Pathfinder** at **10 Representative Sites** (SEAI partners) to identify **Deep Retrofit Solutions and Costs**
- 4 Acute Hospitals – 4 Long Term Residential – 1 Primary Care – 1 Office. (7 SEU sites)
- **Works to progress at 10 pilot site 2023 to 2026**
- **Using pathfinder Stage 1 design Report to prepare up scaled Building Stock Plan** for Remainder Health Sector – Target end year





HSE Pilot Pathfinder Programme



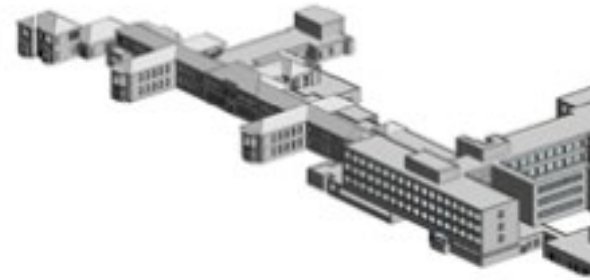
Our Lady of Lourdes Hospital



MRH Mullingar



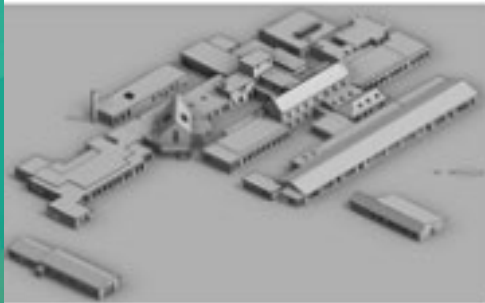
Wexford General Hospital



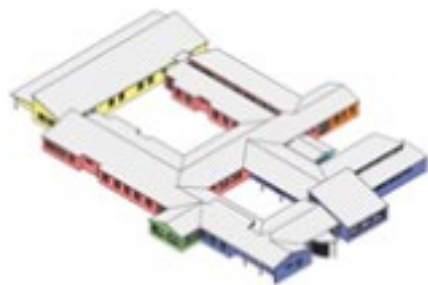
Sligo University Hospital



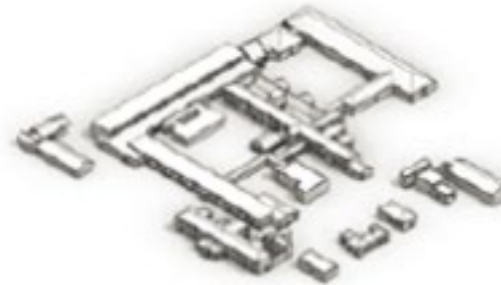
Aras Slainte, Cork



Baltinglass CNU



Lusk CNU



Clonakilty CNU



Plunkett Home CNU



Nenagh Health Centre

Deep Retrofit Programme



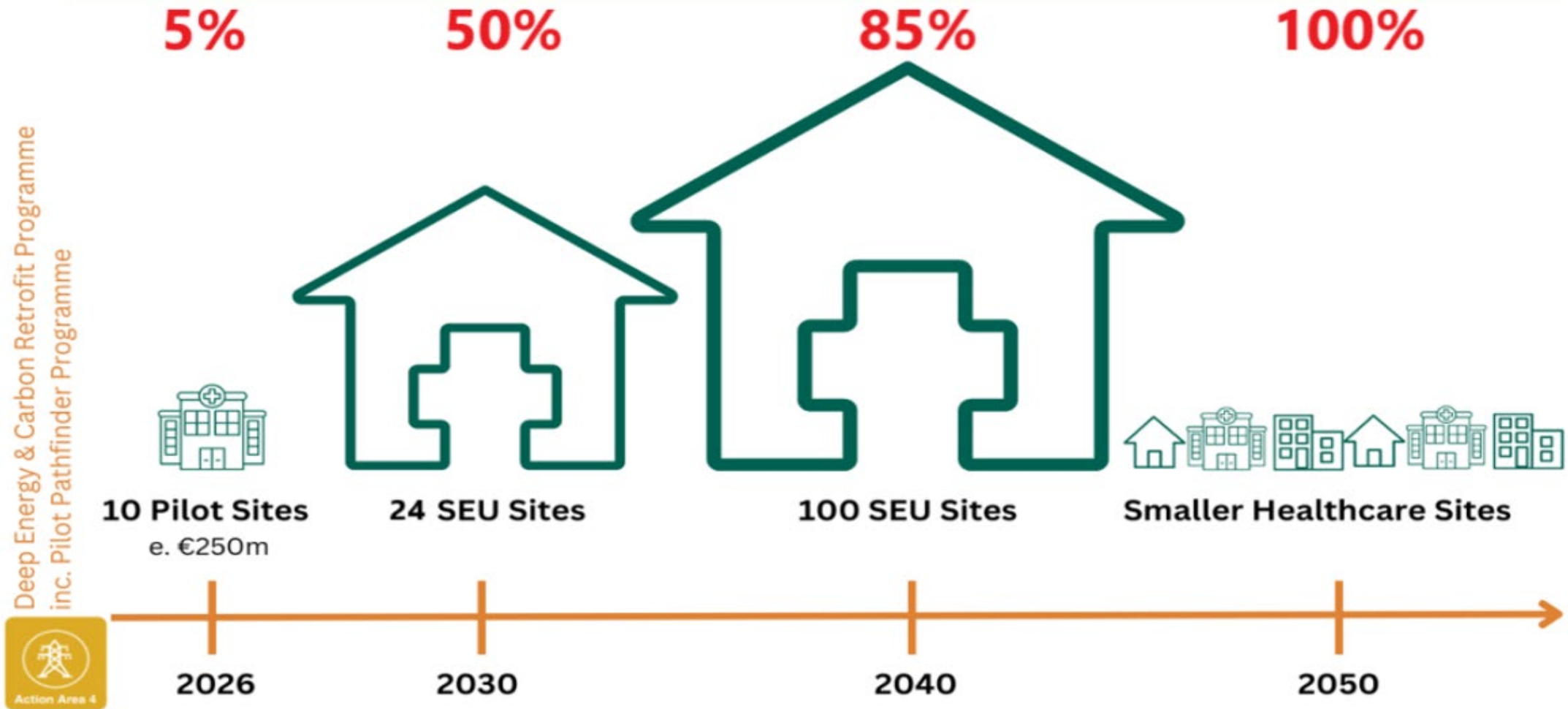
- Site Electrical Infrastructure upgrades
 - MV Ring / Switchgear
 - Substation & Civils Works
- Heat Pumps
 - High Temperature
 - 2-stage Air-Water & Water-Water
 - Geothermal array
- Fabric
 - External Wrap / rainscreen, natural / composite panel
 - Roofing & glazing systems

Deep Retrofit Programme



- BMS & Existing Plant
 - Monitoring & Controls
 - Building up profiles of heating and cooling demand
 - Optimised heat pump solutions
 - Ongoing plant replacement programme
 - Structural challenges and solutions
- PV Installations
 - Roof mounted, carpark and solar farms
- Evolving Technology / Planning
 - District Heating & Heat Networks
 - Deep Geothermal potential
 - Embodied carbon and managing carbon budgets

HSE / Healthcare project pipeline





Thank You

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An Roinn Breisoideachais agus Ardoideachais,
Taighde, Nuálaíochta agus Eolaíochta
Department of Further and Higher Education,
Research, Innovation and Science

Further and Higher Education Sector Energy Efficiency and Decarbonisation

Aideen Foley

Principal Officer, Climate Action and Capital Planning

21 March 2024



**An Roinn Breisoideachais agus Ardoideachais,
Taighde, Nuálaíochta agus Eolaíochta**
Department of Further and Higher Education,
Research, Innovation and Science



Research

Climate Related Research and
Innovation

Impact 2030 – Climate Action as
key challenge and opportunity



Skills

Apprenticeships

Green Skills

Architects, Engineers

Future Leaders

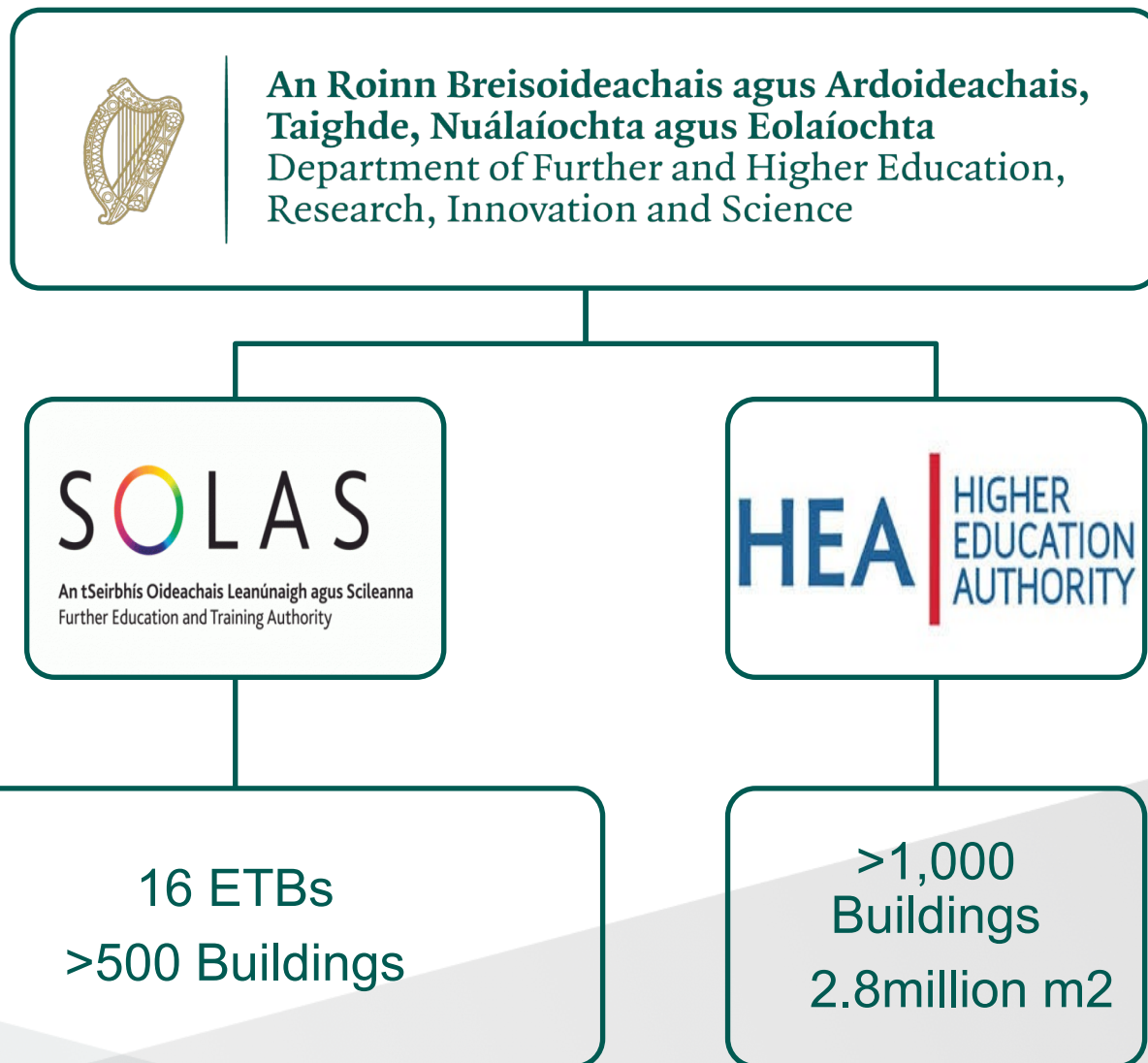


Estate Decarbonisation

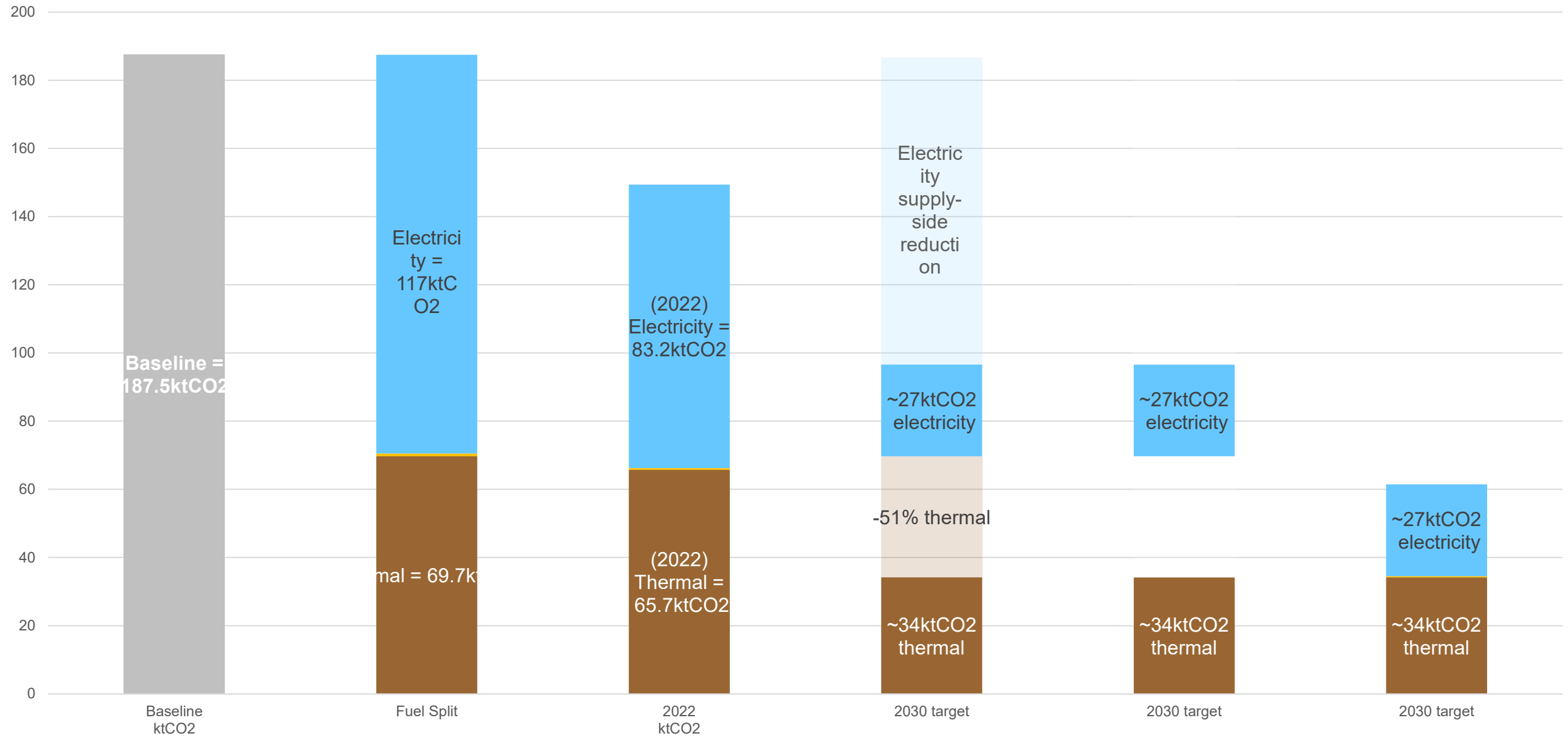
Public Sector – Leading by
Example

Third Largest Estate

Further and Higher Education Estate Overview



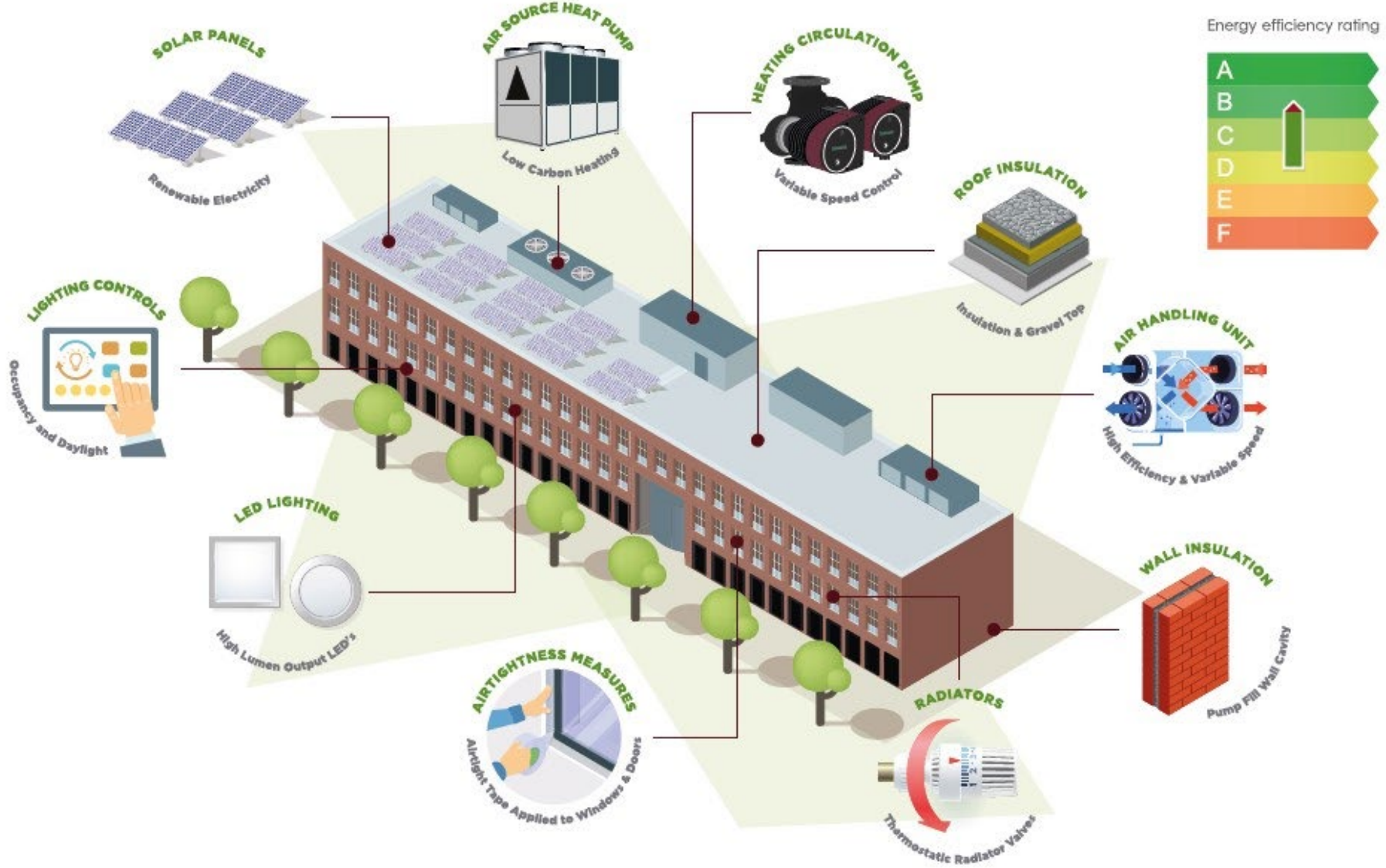
GHG Emissions Targets (2022 data) - DFHERIS Group - ktCO2



What's a ton of CO₂?



DCU Marconi: BER-B DEEP RETROFIT





We need you!



Thank You



etbi
Education & Training
Boards Ireland
*Boird Oideachais &
Oiliúna Éireann*

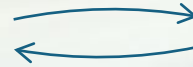
Education and Training Board Ireland (ETBI)

Karl Fitzmaurice

Buildings Officer

The Education and Training Board Ireland ETBI is the national representative body for Ireland's 16 regional ETBs.

- The Department of Further and Higher Education, Research, Innovation and Science DFHERIS (through SOLAS)
- The Department of Education DoE,
- The Department for Children, Equality, Disability, Integration and Youth.



ETB's....

- (a) deliver Further Education and Training to more than 220,000 FET learners each year through 500 FET Colleges and Training Centers
- (b) Manage 27 Community National Schools
- (c) Manage 250 Post Primary Schools with over 117,000 students.
- (d) ETBs also support, monitor and deliver youth services.

ETBs Energy & Emissions Summary

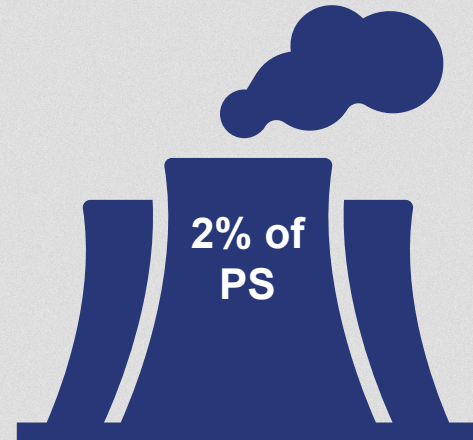
156,000 MWh

Final Energy Consumption



95% in Building

49,170 tCO₂

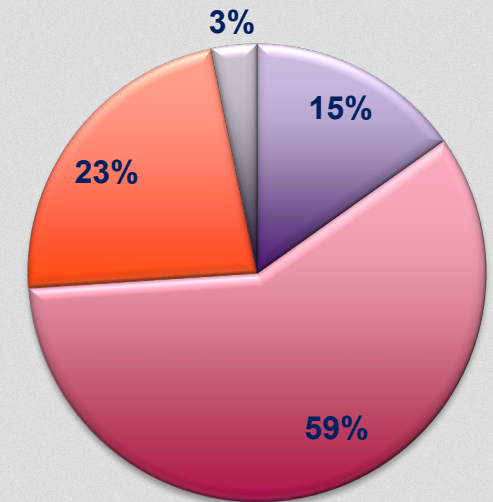


20,162 tCO₂ from heat



29,008 tCO₂ from electricity

2019 kgCO₂ 2030

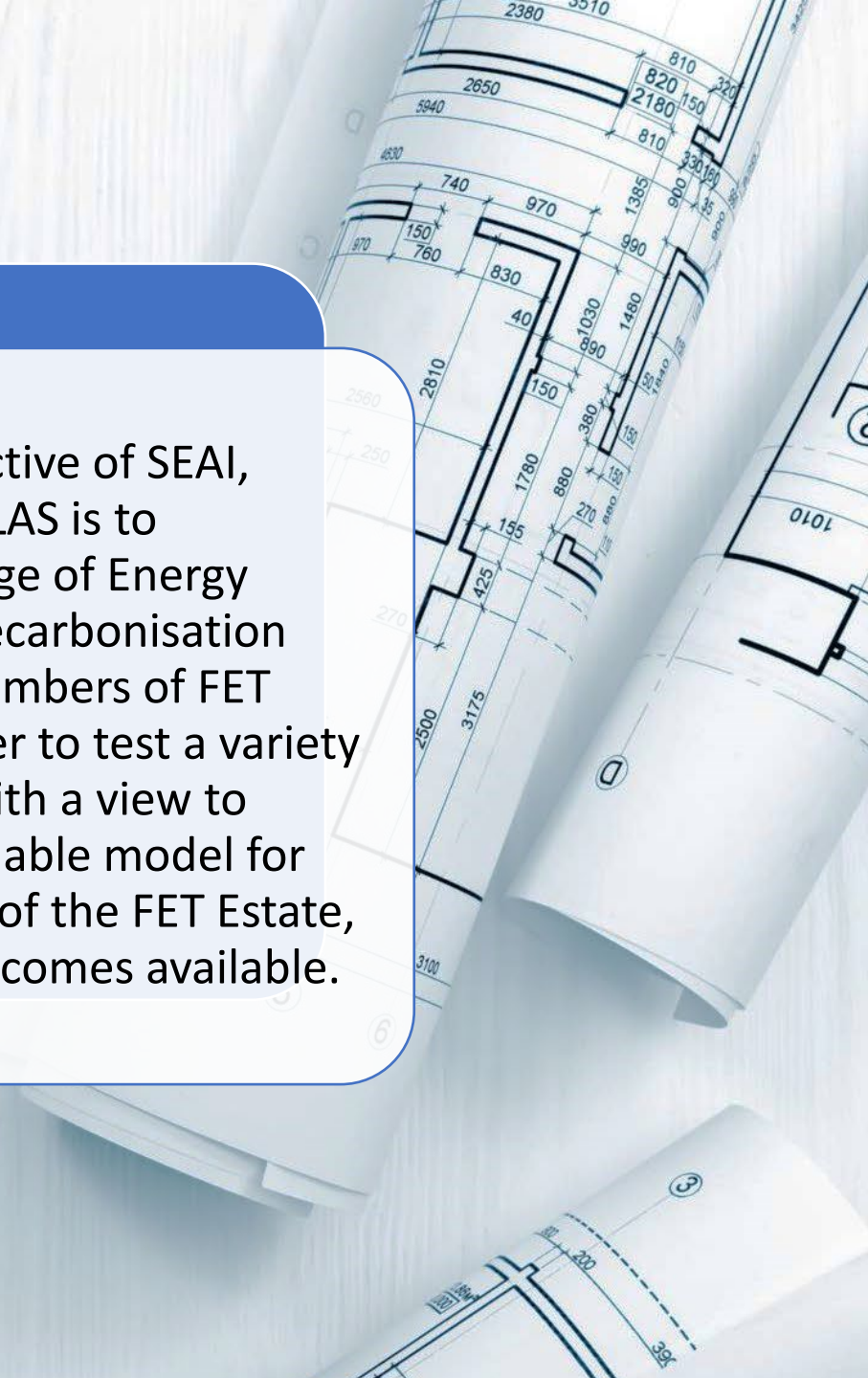


- Training Centres
- Schools
- FETs
- Offices & Other

FET Pathfinder

SEAI, DFHERIS and SOLAS have agreed to collaborate on the delivery of an Energy Efficiency and Decarbonisation Pathfinder Programme for the Further Education and Training (FET) sector.

The shared objective of SEAI, DFHERIS and SOLAS is to implement a range of Energy Efficiency and Decarbonisation measures in a numbers of FET buildings; in order to test a variety of approaches with a view to developing a scalable model for decarbonisation of the FET Estate, when funding becomes available.





Greatest Thermal kgCO2
(M&R 2019 data)



Mix of Building types (Training
Centres and FET Colleges) and
Building Sizes

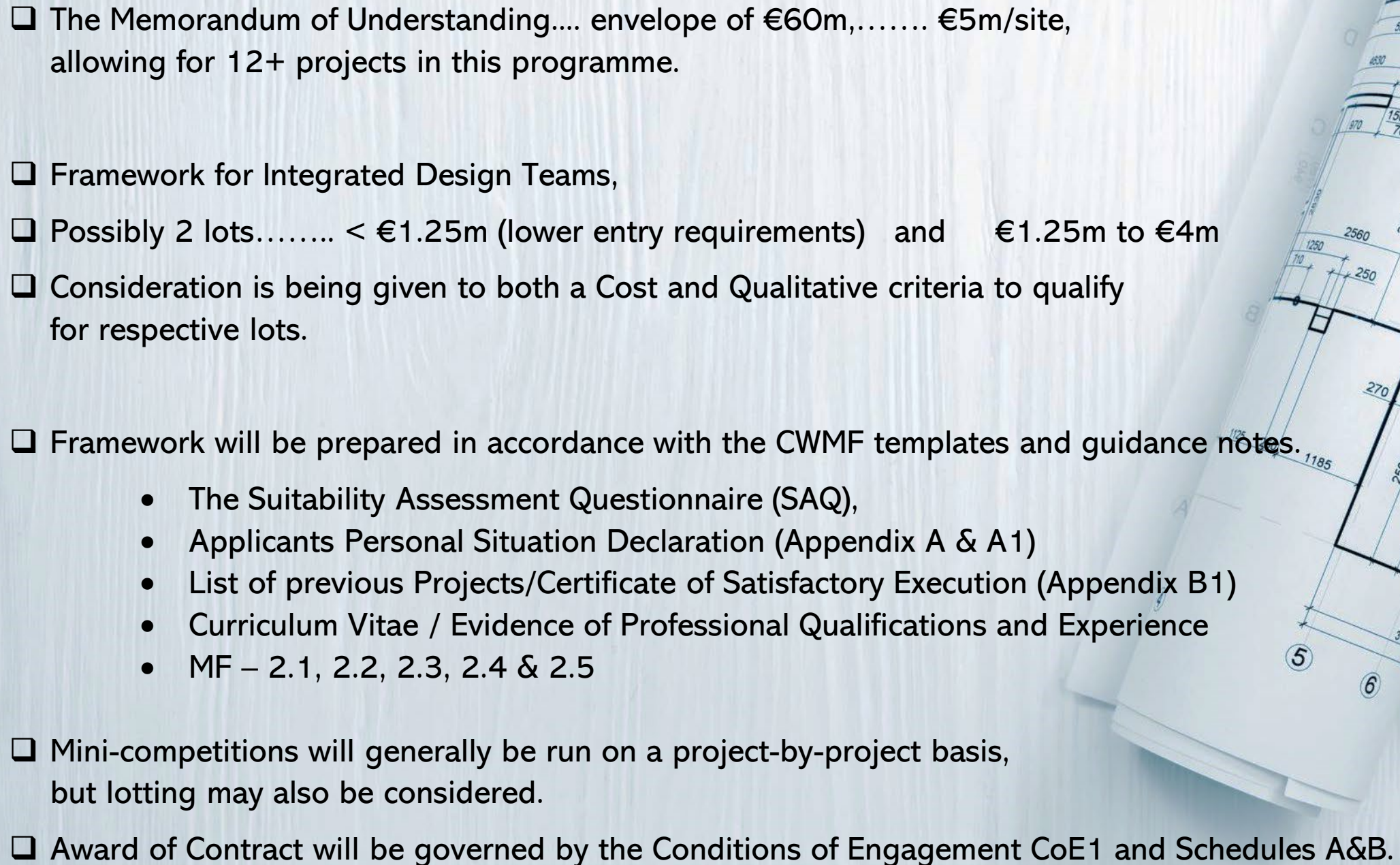


Geographical mix of Locations



Demonstration of prior
commitment to Energy Saving
and Management (Partnership
Agreements with SEAI, MAP
Training, etc.)



- 
- ❑ The Memorandum of Understanding.... envelope of €60m,..... €5m/site, allowing for 12+ projects in this programme.

 - ❑ Framework for Integrated Design Teams,
 - ❑ Possibly 2 lots..... < €1.25m (lower entry requirements) and €1.25m to €4m
 - ❑ Consideration is being given to both a Cost and Qualitative criteria to qualify for respective lots.

 - ❑ Framework will be prepared in accordance with the CWMF templates and guidance notes.
 - The Suitability Assessment Questionnaire (SAQ),
 - Applicants Personal Situation Declaration (Appendix A & A1)
 - List of previous Projects/Certificate of Satisfactory Execution (Appendix B1)
 - Curriculum Vitae / Evidence of Professional Qualifications and Experience
 - MF – 2.1, 2.2, 2.3, 2.4 & 2.5

 - ❑ Mini-competitions will generally be run on a project-by-project basis, but lotting may also be considered.

 - ❑ Award of Contract will be governed by the Conditions of Engagement CoE1 and Schedules A&B.

Energy Management Consultancy Services Framework

Including:

- i. Energy Management and Guidance,
- ii. Energy Efficiency Design (EED),
- iii. BER inspections,
- iv. Energy Audits – SI 426 and
- v. Display Energy Certificates (DEC)

❑ Each of the 16 lots will result in an individual Contract (single supplier per ETB)

Site Surveys

Including:

- i. Pre-refurbishment Asbestos Survey
- ii. Point Cloud Measured Building Survey
- iii. Air-tightness/ Air-permeability Survey
- iv. U-Value Survey



FET Climate Action Pathfinder – Stage 1 Design Options

Scenario A – Medium Retrofit	50% reduction in Carbon Emissions based on 2030 CO2 factor 50% reduction in Direct (thermal) Carbon Emissions based on 2030 CO2 factor 50% reduction in Primary Energy BER Grade N/A Renewable Heat - % of space heating determined by Design Team
Scenario B – Deep Retrofit	50% reduction in Carbon Emissions, Direct Carbon Emissions & Primary Energy, as above BER Grade B Renewable Heat – 90% of space heating
Scenario C – NZEB	50% reduction in Carbon Emissions, Direct Carbon Emissions & Primary Energy, as above BER Grade B or Better Must meet NZEB as defined in Building Regulations (EPC/ CPC and RER) Renewable Heat – min 90% of space heating
Scenario D – ZEB	Must meet NZEB - EPC No carbon emissions produced on site (No fossil fuel from regulated loads) All energy to be from Renewable source (allowing for 2030 grid being 80% renewable)

FET Pathfinder 2024/2027

Programme Milestones:

- Framework Established by Q3 2024
- Initial 8 Projects Tendered and DTs Appointed by Q4 2024
- Stage 1 Submissions – end Q1 2025
- Stage 2a & 2b Submissions - Q4 2025
- Procure Framework for Contractors - Q4 2025
- Stage 3 Procure Contractors - Q1 2026
- Contractor Appointed - Q2 2026
- Start on Site – Q3 2026



The main solution is so simple that even a small child can understand it.

- *We have to stop the emission of greenhouse gases.”*

Thank you.





Darby Mullen– Senior Executive Engineer

Energy Coordinator

Regional Update – Dublin LAs

Dublin City Council



Comhairle Cathrach
Bhaile Átha Cliath
Dublin City Council

Presentation Overview

- LA Overview
- Local Authority Targets
- M & R
- Decarbonisation Strategy
- Continued Success / Opportunities
- District Heating Schemes
- Decarbonising Municipal Fleet



Local Authority Services

- 31 Local Authorities
- Approximately 31,000 full time employees
- Broad range of services
- Significant Energy Users
 - Buildings
 - fleet
 - other assets



Energy Efficiency / Greenhouse Gas Targets

- 50% improvement in EE by 2030
- 1.9 % annual improvement (EU 2023/1791)
- Annual renovation rate of 3% of the total floor area
- 51% Reduction in Greenhouse Gas emissions by 2030
- Net zero by 2050

Public sector targets 2030

51%

absolute carbon emission reduction, including direct emissions associated with thermal energy

50%

improvement in energy efficiency

Zero

installation of fossil fuel heating systems after 2023

100%

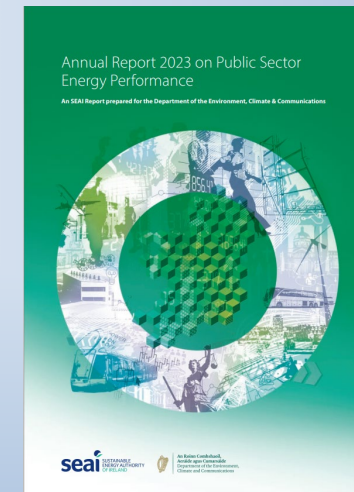
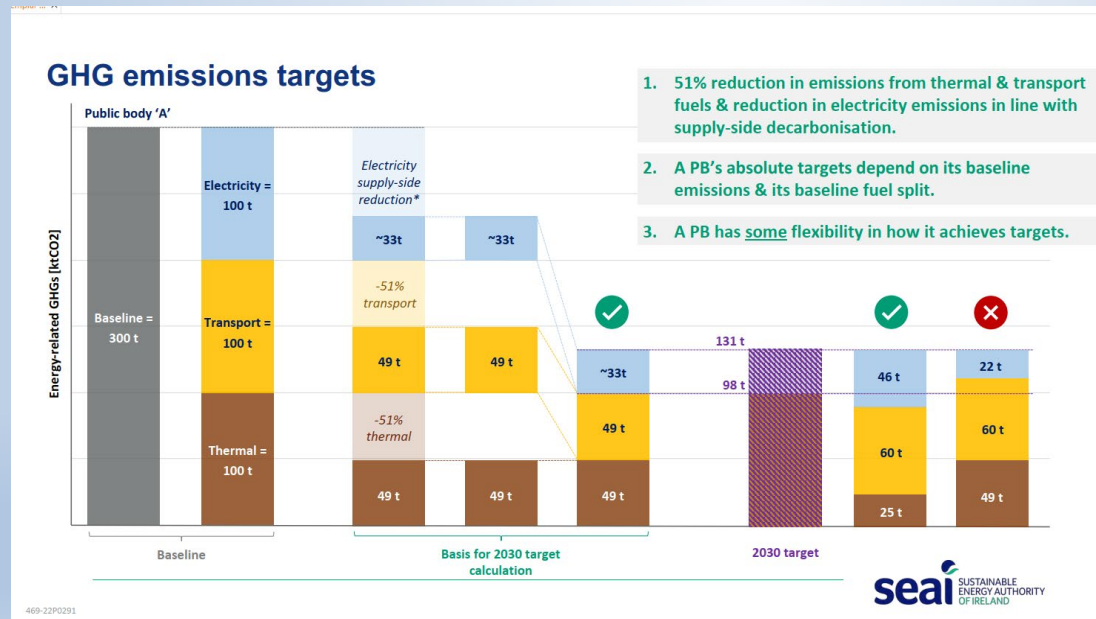
of public sector buildings (around 12,500) must achieve a BER B or higher



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M & R Reporting / Public Sector Annual Report 2023

- Local Authorities and Water Services
 - Final Energy Consumption 1,452 GWh (20% of PS) (714)
 - Public Lighting 179 GWh
 - Energy Related CO₂ – 389 ktCO₂ (193)



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DLA Decarbonising Strategy

	DCC	DLRCC	FCC	SDCC
Current Pipeline of Projects	25	26	36	26
CO ₂ Reduction Target (Tonnes) (51%)	7,173	840	1,465	1,227
Expected CO ₂ Reduction with Pipeline Projects (Tonnes)	4,783	1262	973	909
Gap to Target after Pipeline Projects (Tonnes)	2,390	-422	492	318



Continued Success / Opportunities

- Public Lighting Upgrades
- Energy Performance Contracts
- Building upgrades (HVAC, CHP, BMS)
- Biomass (solid, liquid, Biomethane)
- District Heating
- Heat Pumps
- Transport – Mobility hubs / fleet review
- Solar
- Energy Management / Awareness Campaigns
- Decarbonising Zones / Sustainable Energy Communities



Pathfinder

SEAI funding programme for low carbon energy efficiency projects

Provides up to 50% towards project

CAPEX

Decarbonising DLA Buildings

- Energy Performance Contracts (EPC)
- Energy Performance Guarantee (EPG)

Deep Retrofit

- LA Leading these works



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Dublin District Heating Schemes - Update

1. Dublin District Heating Scheme –
 - Procurement Documents prepared.
 - Prepare new developments in Poolbeg SDZ for DH
 - Funding supports and partnerships being assessed
2. Blanchardstown District Heating Scheme
 - Connect TUD Campus, Connolly Hospital & Sports Ireland Campus
 - Techno-economic Feasibility Study Complete
 - Phase 1 – 10km network 34.5Gw - €43M
 - Phase 2 - +5km network +19.1Gw - €16M
3. Tallaght District Heating Scheme –
 - Annually saving 1,500 tonnes of CO₂ emissions



DLA Energy Management Systems

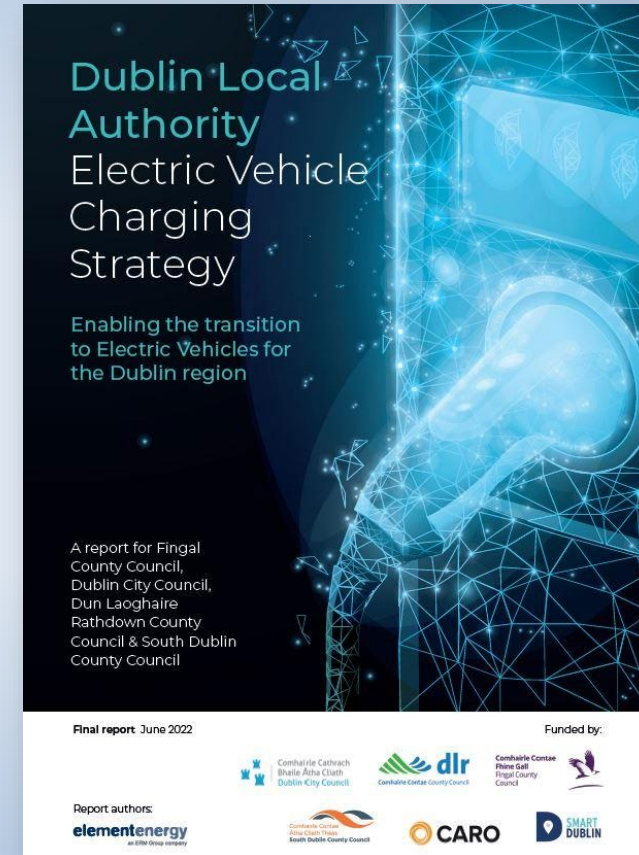
- 4 Dublin local Authorities have established Energy Management Systems.
- DLRCC and FCC have achieved and maintained ISO 50001 certifications since 2016 and 2020 respectively.
- SDCC and DCC have adopted and incorporated much of the standard and are currently pursuing ISO 50001 certification.
- Energy Management Systems for all DLAs include the following aspects:
 - Annual Energy Reviews
 - Regular Energy Team meetings
 - Maintain Significant Energy Users Database
 - Energy Performance Indicators



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Dublin LA EVCP Strategy

- Dublin LA EVCP Strategy with DCC, FCC, SDCC, DLRCC, Smart Dublin and Dublin CARO published June 2022
- Proposed 200 EVCPs across 50 sites
- Tender for Destination Chargers issued by FCC April 23, 2023
- Tender evaluation currently underway



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Thank You



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SEAI

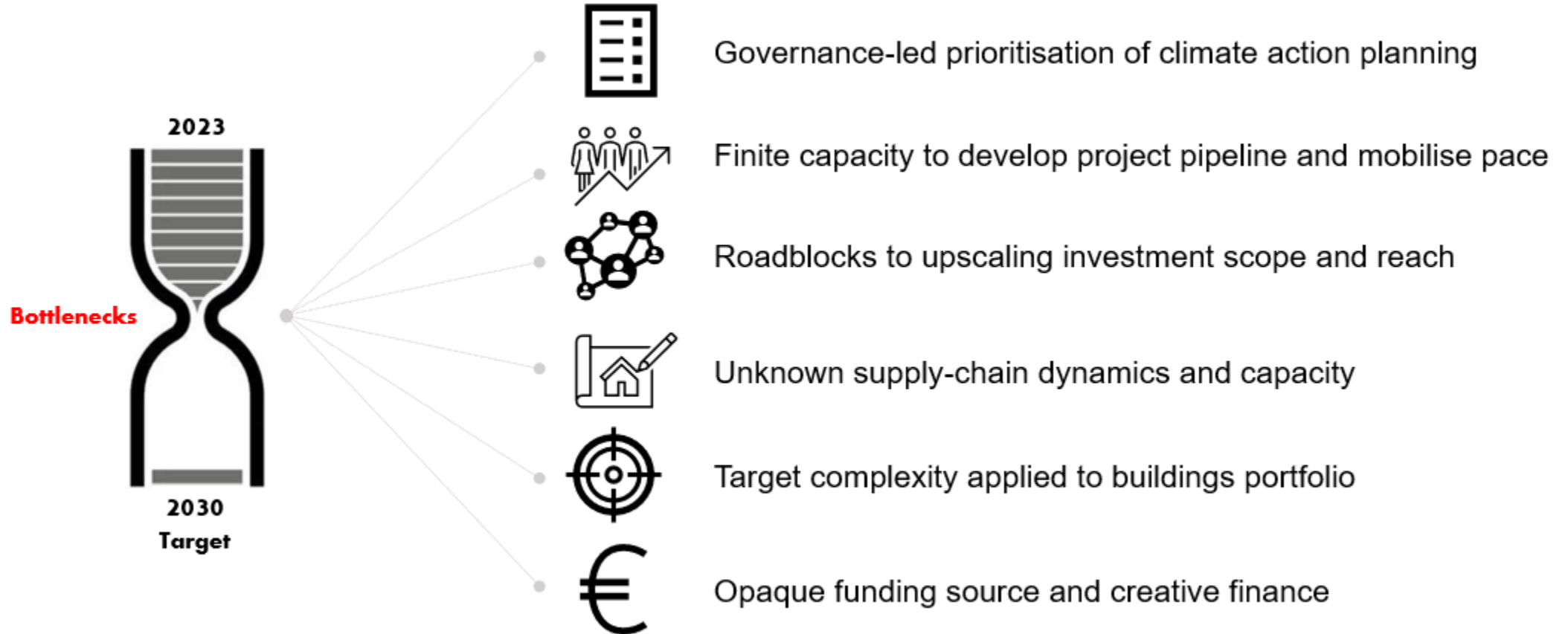
John O' Sullivan

Head of Public Sector and Regulatory Programmes

Approach, Targeted Sectors and Model

- Funding is disbursed with the below objectives
 - Meeting **policy objectives** (50% EE, 51% CO2, BER of B)
 - Targeted at large public bodies, or sectors of public bodies, where overall retrofit strategy can be **coordinated across portfolio leads**
 - Strategically deployed to create a **scaleable model for retrofit** in the sector
 - Piloting delivery approaches to **build capacity/knowledge** within the sector
- Delivery Model
 - Partnership model, focusing on **addressing barriers, challenges** and gaps in each sector to large scale retrofit
 - **Co-develop approach to retrofit** within the sector, trial and share learnings with wider public sector
 - Governed via **Funding Agreements/Memo of Understanding**

Barriers to investment in public sector (Pathfinder review)



SEAI Pathfinder Programme

Schools

2017



Health Sector

2018



Higher Education

2020



Central Government

2017



Local Authorities

2022/2023/2024



Defence Forces

2024



SEAI Partnerships

Leadership Energy Management

- Energy MAP tailored to the organisation
- Access to ISO50001 accelerator
- Bespoke training
- Energy Efficient Design mentoring
- Long term energy strategies

Investment - Project pipeline

- Opportunity assessments
- Gap to Target analysis
- Annual review of projects done and planned
- Advice regarding SEAI capital supports

Performance improvement

- Monitoring and Reporting mentoring
- Embed energy performance systems

Capital - Technical Support

- Energy Bureau
- Design Teams
- Technical Expertise
- Project Management
- EPC Facilitator

50%



Capital - Investment Support

- Priority to Deep Retrofit and Renewable Heat
- Measures on pathway to Zero Carbon

50%

Capital matched funding basis

Strategic Direction

- Performance-based, Climate Action Adequacy
- Mobilise Strategic Pathways & finance
- **Key supports that facilitate**

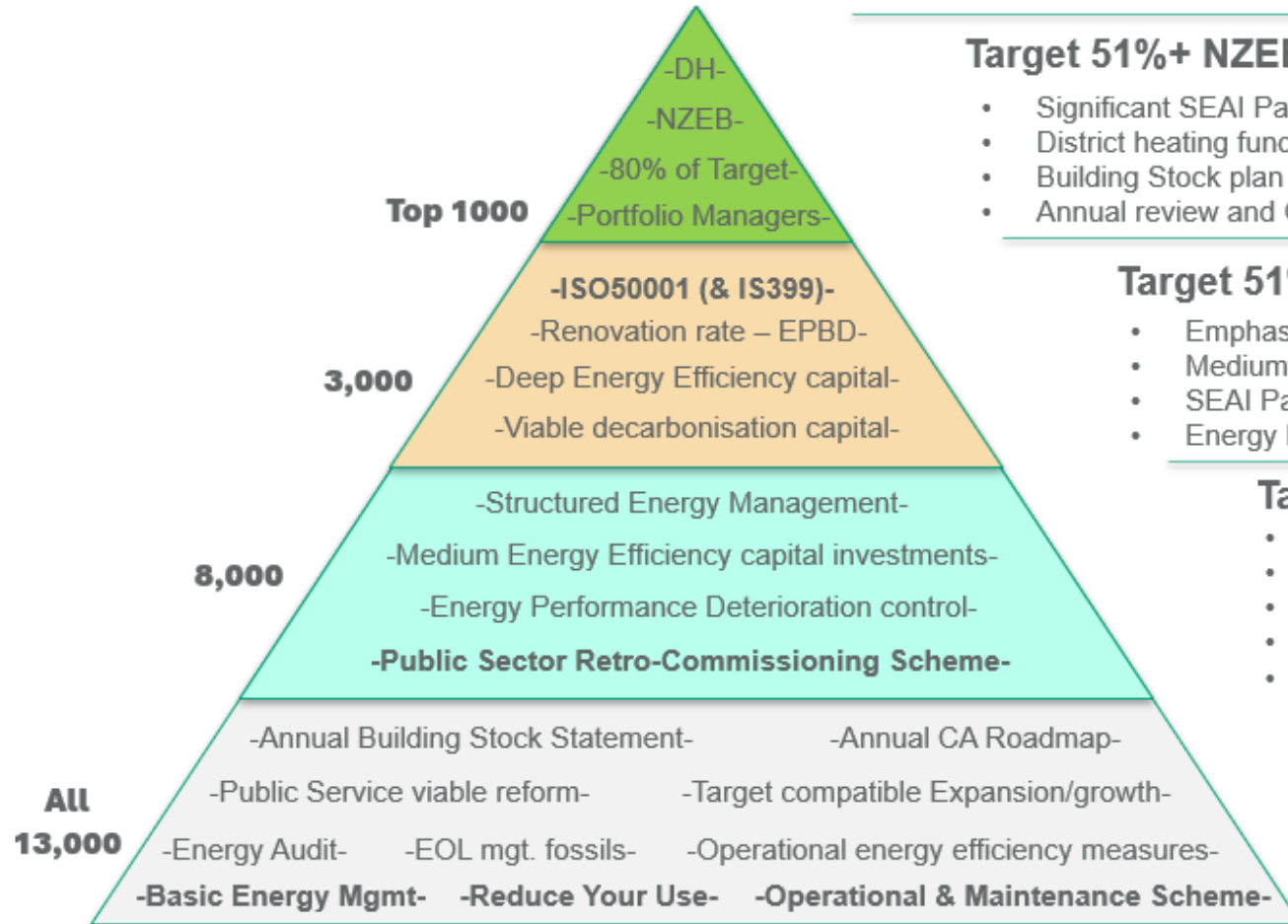
Strategic Direction

- Balanced portfolio, target aligned
- National rollout enabling
- Scale and reach
- **Decarbonisation & Energy efficiency**

LEADERSHIP – INVESTMENT - PERFORMANCE

CAPITAL STRATEGY

Target Achievement – varied interventions



Target 51%+ NZEB/ZEB Emissions, 50% energy reduction

- Significant SEAI Pathfinder pipeline development
- District heating funding and targeted
- Building Stock plan management by Portfolio managers
- Annual review and G2T assessments

Target 51% Emissions, 50% energy reduction

- Emphasis on contribution to overall PS targets & directives
- Medium level Investment based on resource & capacity
- SEAI Pathfinder pipeline development
- Energy Efficient Design Management

Target 30%+ Energy demand reduction

- Retro-commissioning a must for deeper savings
- Mandated actions likely
- Low capex in operational energy efficiency expected
- Deeper Investment based on resource & capacity
- Targeted Pathfinder Pilots, SSRH

Target 20%+ Energy demand reduction

- Target based energy demand reduction
- Mandated actions likely
- Operational & Maintenance opportunity expected
- EE Capital Investment based on resource & capacity

Thank You



Thank You

Networking & Tea/Coffee